

May/87

ZX-Appeal

Vancouver Sinclair Users Group

next meeting:
 KILLARNY COMMUNITY CENTRE
 6260 KILLARNY STREET
 VANCOUVER

FRIDAY; 7:00PM

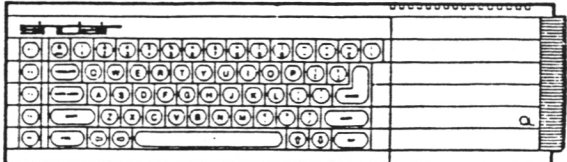
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ZXAppeal is a monthly newsletter put out by the Vancouver Sinclair Users Group. For more information on the group and ZXAppeal see the backcover.

**Next meeting...
 The world famous**



**QL
 DRAW**

... don't miss it !!

THIS MONTH:

- ...Vince*
- ...Rusty*
- ...Roelof*
- ...Harvey*
- ...the Zeeper*
- ...and lots more!*

THIS ISSUE.....

Hooray, Hooray, first of May. Outdoor computing starts today! This issue has lots of good stuff: Rusty T. updates his Profile and also presents 'the Mystery of the Missing Memory'; you might have noticed Harvey T.'s META MEDIA advert in the last issue -- what you didn't see was his address so Harvey gets another shot as well as giving us another installment of 'Playing With Electricity'; the ZEEPER is back with further thoughts about Sir/Uncle Clive's most recent creation; Vince L. turns in his latest foray into Sinclair Basic; Roelof M., homeless since the Ottawa/Hull Users Group faded, has been wandering in the wilderness and offers us a review of various graphics software packages for the 2068 -- probably so we'll take him in...come on in, Roelof, make yourself at home; I've presented a review of BYTE POWER, a cassette based magazine for the 2068; we finish off with some reprints from the 'best of the network'.

BITS & PIECES

...if your telephone starts to act up, make sure one of your modem boards isn't kaput before calling in BC Tel...it could cost you some money if the problem is not with their equipment...I speak from experience.

...the CANADA COMPUTES magazine will be handed out this month...If someone will remind me to take them to the meeting this month.

...if I get the film developed in time, I'll put on a show of the slides I took at the ComputerFest. ...we will have a guest speaker at the meeting - the chap running CITYLINK BBS will stop in and tell us everything we want to know about running a BBS.

...remember to hand in the list of your system components for the database at the meeting. We're

developing a good database of the different hardware in the club. This will prove to be a strong source of info for those members wishing to add pieces of equipment or upgrade their systems but not sure what is best for their particular setup.

...the TIMEX SERVICE DEPT. repair/replacement fees are: 1000 - \$20.00US, 1500 - \$25.00US, 2068 - \$30.00US. They advised me that they were still accepting units for repair at the moment but it's starting to sound iffy for the future.

...Tim S. says he stocked up on parts for the memory upgrade so let me know if you want your Rampak or machine upgraded.

...next meeting will see the drawing for the QL Kit. Make sure you're you don't miss this one.

...speaking of draws, the club might purchase some goodies at the 'FEST and have another draw - this time on a smaller scale but still for some good stuff. I hope Canada Customs has a sense of humour when I come through.

RENEWING MEMBERS:

Glenn Read
Kevin Kerney
Dale Borley

Remember to renew at the meeting if you received the dreaded EXPIRY NOTICE.



"The computer company says call the software company. The software company says call service. Service says it's not in the contract. read the training manual. And nobody understands the manual."

Keeping the supercomputer lead

It seems every time a supercomputer is installed in Canada, it comes amid controversy.

The inauguration of a Control Data Cyber 205 by Magnus Aerospace in Cape Breton is the most recent example.

Enthusiasm was tempered because of press reports that the new supercomputer was: used before, slower than others on the market and in general, simply a tax write-off.

When pressed, Control Data executives and provincial government representatives dismissed the reports as "unsubstantiated."

Last March, the University of Toronto came under scrutiny when it in-

stalled a Cray for scientific research.

At that time, critics wondered whether universities, public funding in tow, should be allowed to go head to head against the service industry.

Clearly, the question is who pays the high price of a supercomputer. With the University of Toronto's Cray, the Ontario government pledged the initial \$10 million towards the machine cost of \$32 million over the next five years.

Also, the \$35 million computer centre in Cape Breton may qualify for up to \$20 million in Cape Breton Incentive Tax Credit payments that are part of the federal government's development schemes for the finan-

cially-troubled region.

Another example comes from out west where a Cyber 205 installed at the University of Calgary was aided by a \$10 million free-time development program funded by the Government of Alberta's Department of Economic Development.

Three supercomputers later, questions about whether the taxpayers should be footing the price tag of these enormous machines continues unresolved.

But if supercomputers are to gain a foothold in the research community, some concessions need to be made in the interim.

It's a Canadian reality - when it

comes time for a megaproject, we have no choice but to open the public purse strings.

And supercomputers fit into this category.

Yes, the operators of supercomputers must be held accountable - simply too much money is at stake.

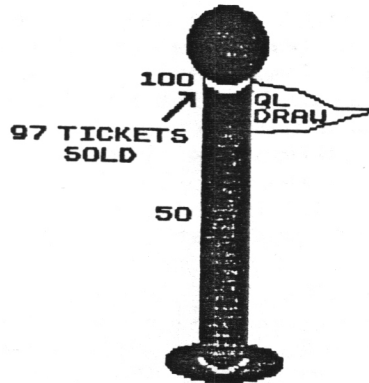
At the same time, despite the controversies, Canada must forge ahead with the installation of supercomputers in both the private and public sector.

As a Control Data executive claims in a front-page story, "Our seven systems are more than those in the U.S. or Japan on a per capita basis."

Canada is in the lead. Let's keep it.

...Meeting date

MAY/87						
SUN	MON	TUE	WED	THU	FRI	SAT
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24						
31	25	26	27	28	29	30



PROBLEM CORNER (Attention in the NETWORK)

Marie Kendall came up with this one. Drop us a line if you have any information to offer.

She is having a problem with a SPECTRUM version of MASTERFILE running on a 2068 with a RAINBOW PLUS interface. The problem arises when printing some labels, she loads the overlay "MFP Ovlv" and tries to get into the edit mode. At this point the program bombs with the error message "N STATEMENT LOST" and the codes "0:255". [a Doug Dewey emulator does the same thing.]

Do you know how to solve this problem?

Paradigms

Thomas Kuhn who has studied the process of change in the scientific world coined the phrase "paradigm shift" to describe the quantum leap to a new (& often disorienting) model of a physical process. For example, witness the centuries of debate & controversy before the Copernican world view displaced the Ptolemaic. There is a similar paradigm shift occurring in the computer world.

Consider memory; at the International Solid State Conference in New York this past February, Nippon Telephone & Telegraph demonstrated 16 megabit DRAM & announced they were researching 64 & 256 megabit devices.

Until recently it has been the pattern in the micro computer world that one had a relatively small amount of RAM compared to what was available in mass storage. In the 8-bit micros, the linear address space was limited to 64K and typically one had 180K or 360K of disk capacity. The ZX81 with 2K expandable to 56K is an example of this, as are the early CP/M systems & the original PC.

As higher capacity memory becomes more common [& hence cheaper via economies of scale], the emerging pattern will be computers which typically have far more RAM than they do mass storage.

What is this going to do to the way we compute? In the long term, this change will promote the growth of parallel computing systems. What is the use of having gigabytes of memory if you're going to use it one byte at a time? A system which accesses gobs of data simultaneously will use that large memory capacity much more efficiently. In the shorter term, we can expect to see changes in operating systems & in the standard configuration of systems; one disk drive will be sufficient. Simply

copy everything you need to RAMDISK and work from that.

Let me repeat, because the answers are far from obvious & not all in : What is this paradigm shift going to do to the way we use our machines?

Mass Storage Overview

Let's take a look at mass storage. There is a wildcard in the works called CD-ROM which might turn some of this speculation upside down. CD-ROM will become widespread because it is a medium which can ride the coat tails of CD audio which is wildly successful. The so called WORM [Write Once, Read Mainly] optical technology will be a lot more expensive because it is significantly different from CD.

Disk Drives

When I first started researching disk drives with a view to putting them on my QL, I was bewildered by the varieties available & the general low level of knowledge about these devices. Most people treat disk drives as black boxes which will store information [hopefully *], about which nothing else need be known. I have yet to find a good reference book on disk drives. If you know of a good reference work, please drop me a line.

One of the confusing factors was "density". One hears mention of Single, Double, Quad, & High densities, sometimes called SD, DD, QD, & HD (& sometimes 1D, 2D, 4D & HD). The difference between single density & double density is the encoding scheme, ie. the method the disk controller uses to encode data on the disk -- Frequency Modulated (FM) for single density & Modified

Frequency Modulated (MFM) for double density. Surely quad density would imply yet another encoding method one would think, but no -- quad density uses MFM like double density but doubles the number of tracks per inch [up to 96 tpi]. High density drives, which are used on the IBM-AT, increase the number of sectors per track. There are other encoding schemes used as well. Apple & early Commodore use a method called group encoding which eliminates the need for separate clocking bits by eliminating all instances of concurrent zeroes in the data.

Hard Disks

There are a variety of factors to consider in hard disks. These devices are sealed and, given an encoding scheme, can store only a fixed amount of data. Where hard disks shine is in the speed with which this data can be accessed, typically 25-60 ms. This is largely due to the fact that the disk runs continuously at 3600 RPM, so you don't have to wait for the disk to get up to speed. Now the problem with this is clearly that running constantly is going to lead to wearing out bearings. There are two types of disks used in hard drives;

powdered and plated. The powdered variety magnetize a rust like surface, while the plated use an ion splattered surface. The plated variety are best [& most expensive] because they are less likely to suffer ye dread head crash. The read/write heads on these drives float mere microns above the surface of the spinning disk. Even the tiniest speck can get in between the disk and the head wiping out vast tracts of data. There are several standard sorts of interfaces to hard disks. There was first the SASI [Shugart Associates Standard Interface] which begat the SCSI [Small Computer Systems Interface] which begat SCSI-PLUS. There are proprietary interfaces. On hard disks several encoding schemes are popular; one of which RLL allows one to effectively double the capacity of the drive.

...concluded next month

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*****
*META MEDIA PRODUCTIONS, 726 WEST 17TH, VANCOUVER, BRITISH COLUMBIA, CANADA, V5Z 1T9 *
*
* META MEDIA PRODUCTIONS Announces for the QL
*
* FRACTAL- Mathematically based Graphics generator modelled after Mandelzooom
* - Floating point & Fixed point calculation. Fixed point is 10X faster!!
* - Three different functions included: Mandelzooom, Peanozooom & Circle^2
* - Optional screen compression, Zoom, Recolour, Flip graphics screens
* ROMON - Eprom based Monitor with many features: User defined windows, 3 default
* - screens. Disassemble to any channel. List all Functions & Procedures with
* - addresses. Trace & Disassemble mode. List all channels open, with device
* - drivers. Complete Job Control. 4 Breakpoints, 1 Sticky Breakpoint.
* - Features 24 primary commands. Supplied on an eprom card for the ROM port.
* Q_LINK- A complete telecommunications package for the QL. Features Xmodem, ASCII
* - file transfer. Hayes, Avatex, compatible. Integral editor for document
* - creation; allows you to edit the capture buffer; makes it easy to upload
* - downloaded info; simply mark the block & save or ASCII transfer it. Signon
* - messages, AutoDial, Redial, Edit Phone List, signons, default devices.
* - 300 1200 baud operation. Comes with Unsqueeze, Delibrarying utilities.
* Bottom lines: FRACTAL-On mdv or disk(specify tpi) for US$19.95 + $2.00 shipping
* ROMON -Supplied on a plug in ROM card for US$34.95 + $2.00 shipping
* Q_LINK -On mdv or disk(specify tpi) for US$19.95 + $2.00 shipping
*
6 *META MEDIA PRODUCTIONS, 726 WEST 17TH, VANCOUVER, BRITISH COLUMBIA, CANADA, V5Z 1T9 *
*****
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the run with no loss of data.

Last but not least is the display. The trend among producers of normal computers is to manufacture lap-top portables with the option of using a standard video display. This is generally RGB, mono, or composite. Forget it with the Z88. All you get is a 8 line by 80 character LCD display. Normal computer manufacturers design their LCD displays to have their display angles adjusted independently of the keyboard. The Z88 has it's display on the same plane as the keyboard and the whole assembly can be tilted 12.5 degrees.

Believe or not you do get a full QWERTY keyboard. This gem has something known as "silent, moving short-travel keys". Translated, this means that D'Ktronics will have to design another keyboard.

How do you get one? Only

by mail-order and a 28 day wait if you're lucky. Now everybody knows that Sinclair has totally re-defined the length of 28 days.

Once again Sir Clive has missed the boat. This system is in many respects a major step backwards for even Sinclair technology. It does not have the display facilities nor the power of the QL. It is limited to one serial port. There is no disk facility. It uses an "unique" operating system. It has the most bizarre storage medium ever designed by Sinclair. It will never fly in North America.

Well kiddies, I hope some of you will avoid plunging headlong into another Sinclair disaster. If you want a laptop, get a Model 100. It at least has a built-in modem and you don't have to wait 28 days to get one.

ST CLASS MAGAZINE REVIEW

One of the pleasures of being Treasurer and Editor of VSUG is the opportunity to speak with many of the out-of-town members. Two such members are Eric and Kris Boisvert of Pickering, Ontario. Eric and Kris have been members of VSUG since August '85. In August '86 Eric and Kris launched BYTE POWER - a cassette based magazine of ready-to-run programs for the 2068. I'm told that BYTE POWER is well on its way with almost 200 subscribers. At \$49.99us a year that's not bad! I was given the Premier Issue as well as the Dec/Jan issue for review purposes and if these two issues are any indication of what's in store for any subscriber then my cheque is in the mail.

The August issue, upon loading the first section, displays a world map with the BYTE POWER logo superimposed, while a delightful classical melody plays from the speaker. Touching a key halts the music and brings up a menu allowing one to change some of the display parameters, quit the program, read about BYTE POWER, or go on to load the various program instructions. We're given some GOOD tips about better programming techniques, a Hardware Review article about the Rotronics Waferdrive, and a preview of what to expect in the next issue. After reading the above, we choose to load the program instructions and so start the recorder.

THE ZEEPER SPEAKS...

Greetings to the most neglected orphans of the computer world. This month I have decided to to make a humanitarian gesture towards you poor pitiful souls. The British office of Zeeper International has sent a copy of the ad for the Z88. I will tell you the way it is concerning this little beastie with only a minimum of derogatory comments concerning that balding misfit who invented it.

First, the good news. It has no moving parts. Now the bad news. This machine has something to annoy everybody including the most faithful of Sinclair fanatics. It is priced at (all prices pound sterling) 229.95 for the basic machine which is 32K. It is battery-operated but you might want the external power supply for 9.95. The batteries (4 penlights) only last for 20 hours continuous computing or a year if you never turn it on. If you want to expand the memory you can buy 32K (19.95) or 128K (49.95) ram cartridges. Which you can plug in to the three ports to give up to 416K. Of course, there is the 1 Mbyte cartridge which will be released "soon".

So we have an 8 1/2 by 11 inch computer with three little boxes sticking out of it. Well you can't stop there. As you might expect, this toy has a completely weird storage device. No, it doesn't use a miniature open-reel tape recorder. It uses EPROMS. You can buy a 32K (12.95) or a 128K (49.95) EPROM cartridge to store your programs. Now this is the first real taste

of Sinclair weirdness. Every computer user has the occasional need to erase one or more programs. The Z88 prevents you from doing that with it's EPROMS. You can't just erase one 8K program from an EPROM. Using the U/V Eraser (29.95), you erase all of the programs stored on an EPROM.

In case you want to print out something, the Z88 is thoughtfully provided with one RS232 port. Now the entire civilized world uses Centronics ports for printers. The fact that the Z88 doesn't have a Centronics port is consistent with the Sinclair image. You will need a printer cable (9.95) to hook up to your printer.

The same RS232 port is used for communicating with IBM-compatible systems. The Z88 can "exchange text and data" with an IBM. It is NOT BY ANY MEANS IBM COMPATIBLE. For this "exchange" to take place you need a special I/O Software/Cable package (14.95). The software is on a floppy and it's major function is to convince your IBM that it really wants to talk to this thing. You also need a modem (99.95).

Now for the operating system. "The operating system of the Z88 is unique to Cambridge Computing Ltd." This means that no one else in their right mind would consider trying to use it. Fortunately, you Sinclair freaks are not in your right minds. It has a built-in spreadsheet and word processor. It also has your standard SideKick clone consisting of database, calculator, notepad, calendar, and real-time clock. You can switch between applications on

The first program is a fair version of the arcade classic - 'Grand Prix'. Your car can be controlled by either a joystick or from the keyboard. Watch out you don't overheat the engine or wear out your tires on the corners!

Next is Hang Man. We've all played it but not with the vocabulary available to this tough game, and good educational fun for the kids too.

Next is 'Knights'. An original game to see how few moves it takes to touch every square on a chess board moving the Knight chess piece in its unique way across and around the board. There's a demo mode but watch carefully, it moves quickly.

Then comes 'The Minotaur' -- a multi-level maze-like game that has the player battling all manner of creepy creature using the Swords of Strength and the secret treasures. Only after finding the exit and killing the Minotaur can you escape...only to find yourself in an even more complex maze.

Then next is 'Robot' -- a very exciting 'space invaders' type game. This one I really enjoyed. You have to be quick to last awhile but you'll never win. A lot of fun!

Then there's 'Shooter' -- my favourite - probably because I beat the machine at this one. Another space-ship shoot'em but alot of fun. I reached 5000 points - thats when the real fun begins!

Next up is 'Paranoid'. You might remember those games a couple of years ago where you had to repeat the combination of moves made by the machine as it moves around four coloured squares with four different notes playing. This is the same but you have to repeat up to 32 moves -- if you can.

Then we have 'EASYtype' -- a nice little word-processor. Not as complex as some but very easy to use and it only takes 45 seconds to load. The 'big' w.p. programs have alot more features but how often do you want to do more than just type out and print a quick letter without alot of fuss.

EASYtype allows you to do just that. There's a special file all ready to be loaded and printed. I won't tell you what it is but to say "it's a real beauty".

Next we have a really handy renumbering utility. This one will renumber all GOTOs, GOSUBs, etc without affecting UDGs.

The next program 'Graphics' doesn't do much except show off the amazing graphics abilities of the 2068 when programmed by an expert. Just let it run when your friends drop by. Then they'll stop asking "but what does it do?".

The last program is really my favourite. I'm a firm believer

that the 2068 has alot more 'sound' potential than has been shown by any program up to now. This program does a good job of achieving success in this direction. This program is called 'A Feast of Classics' and is just that. You can choose to play any of seven pieces of classical music, including the menu piece or you may just let the machine play them all sequentially. This is beautiful music. I let the machine play away in the background whenever I wish some nice soothing background music. A nice example of what the 2068 is capable of.

Lastly, we find 'The End' -- with Eric and Kris graphically represented waving 'goodbye' to us as 'The End' rotates on the screen.

The other tape I received is full of more terrific programs but a review of that tape will have to wait until another time.

All in all this package is very much worth the slightly expensive price, especially when you consider the degree of professionalism that went into

the creation of the good mix of Arcade, Utility, Sound, Graphics, and Adventure programs contained on the tape. AND YOU DON'T HAVE TO TYPE THEM IN!
.....BUY IT!

BYTE POWER
1748 Meadowview Avenue
Pickering, Ont., L1V 3G8

PROFILE UP-DATE

By Rusty Townsend

In my original profile I said I would give you an up-date when I got my QL together and running. So here's my first real use of Quill on my QL.

First of all, I don't understand A+'s shipping policy. Based on the post-marks, my order did not get shipped out until exactly one month AFTER Rod H actually received his!

After that, the first parcel with the books and manuals got here in 4 days while the second parcel with the computer kit took 8 days with a detour through Customs. Not bad from New Hampshire considering that a letter from the other side of this city will often take 4 days or more.

It's a good thing that the books and manuals got here first as that forced me to spend the 4 days reading up and getting ready for the unfamiliar task of assembling my QL.

When it did get here, the box contained a letter to the effect that they had run out of QL kits and had sent me an assembled QL at no extra cost, and would I please check that it was running OK before I took it apart! Well, it is running OK, I have no desire to take it apart after seeing the kit that Rod H showed at an earlier meeting, and A+ is forgiven for the delayed shipment.

I had ordered some extra mdv cartridges, so my first use of the QL was to set up a short program to format each cartridge six times. I began to wonder about the reliability of the mdv system when 3 of the 12 cartridges were faulty- one simply wouldn't format and the other two stretched from 220 sectors to 240 sectors while formatting and then failed.

I have since ordered and received another 20 blank cartridges and all of them have passed this 6-pass format procedure OK. Made me feel a little better about the reliability of the mdv system, and sure proves that every cartridge should be well tested before you attempt to clone or save something to it and only use a one-pass format procedure, if any.

With my good cartridges I have cloned the four QL programs and done some experimenting with all of them. Even with my past experience with the TS1000, TS2068, and an APPLE that required typing in everything, I can see that the QL will require some time to really master all its capabilities.

I got the tennis program, MATCH POINT, just to have an example of a games program to demonstrate but find you really need joy-sticks to get the best use out of it. I must admit I get a kick out of watching the QL playing against itself.

I'm not much of a chess player, but my son has played chess on both the TS1000 and the TS2068, and thought the latter was really quite good. So I also got Psion's CHESS which he thinks is fabulous and better than any of the others. I may have to get another QL before he wears this one out just playing chess!

My real interest is working with numbers and spread-sheets. I have acquired several spread-sheet programs for both the TS1000 and the TS2068, so I'm familiar with the differences in the various programs. ABACUS is an excellent one in many ways, although it still has a few short-comings. At some later date, I'll put out an article describing the differences in those spread-sheets as compared to ABACUS.

In my original profile, I mentioned that I had an idle Roland PR-1111 printer and that I was holding off ordering an interface to connect it to my TS2068.

Once I had my QL, it didn't take long for me to decide that the Roland should be hooked up to the QL and just as soon as possible, so I phoned Sharp's and had an interface delivered by mail, again in 8 days with a detour through Customs.

I expected something that would plug into the back of the QL and then a cord to connect that to the printer. Instead I got a cord that plugged into the QL with a black plastic box on its other end that plugged into the printer. Actually it's much neater looking than what I expected to get, but more important, I plugged it in and it worked without a fuss.

Multi-Draw 2068

Cost (1985) 24.95 U.S.

This graphics package is very similar to a sister program for the Spectrum called The Artist although the latter is somewhat more sophisticated. Basically, the program runs in a format that is commonly referred to as menu driven. That is to say that there is something almost always on screen to display the commands or functions available for the software package. The alternative is called command driven, where the commands or utilities are documented on paper and are to be memorized in order to make adequate use of the software package.

Multi-Draw has a command line at the bottom of the screen that consists of the following structure:

```
column 0 menu list options
  1 for text input
  2 BX magnification
  16 attributes and colour
  17 bright
  18-31 switches between udg's
```

The commands available are:

```
Draw, Colour, Big Prt, Sm. Prt, Gry Prt, Copy, Save PG, Load
PG, Save S$, Load S$, Basic, Clr S$
```

A joystick is required in order to access the various functions as well as to do the drawing. As the diagonal positions are used to obtain the appropriate commands etc., it is most important that a good joystick is acquired in order to detect the angles properly.

What is most alarming and somewhat strange, is that to do a circle you have to exit to basic and do it from there. It was nice to find that the program caters to a large printer, but which one is a good question. It certainly will not work on a Fasttext 80. The other facilities of the program were to a great extent applied much better in other graphics packages but are functional in this one.

It would have been nice to have had windows, rubber banding, circle, merge and airbrush to name a few, but I suppose that for most people interested in producing banners or post cards, this program will suffice.

It is rather obvious that the author is somewhat biased against this software package, particularly in the light that the Timex 2068 has available a far superior graphics utility called hi-res colour and display modes, and yet no one, and in this case the authors of this software, have not applied it. Should such a facility have been catered to, then I surmise that the resulting software would have been able to blow all other graphics packages away!

Rather than continue in reviewing each and every

graphics software package that is currently on the market, or more precisely, that is in my software library, I propose to list those packages and indicate against each one, whether or not it contains a certain facility that I feel desirable as a major item. It should be noted that in the grading or assessment, if a facility was a complicated process or unmanageable, then it is deemed to be not in existence. Also, if through basic, there was the possibility to apply the program to disk drives or micro-drives, then it was determined that it exists.

If other software packages are out there such as ART WORX or PC DRAW-2068 add them to the list as well to get a good picture of an overall standing. The reason that I have not included them is obvious, I don't own it.

Without further ado:

Package#	1	2	3	4	5	6	7
Content							
Machine type	TS	ts	sp	sp	sp	sp	sp
j.sk/k.bd/a.ll	j	j	a	j	j	j	k
T.2040/l.arg	l	l	l	t	t	t	t
elastic(y/n)	n	n	y	n	y	n	n
prog.draw	n	n	n	n	y	n	n
udg's/edit	n	y	y	y	y	y	n
colour contr	y	y	y	y	y	y	y
erase	y	n	y	y	y	y	y
restore eras	n	n	y	n	n	n	n
fill	y	n	y	y	y	n	n
textures	n	n	y	n	y	n	n
air brush	y	n	y	n	n	n	n
magnify	n	y	y	y	y	n	y
save(t.m.d.a)	a	a	a	t	m	t	t
grids	y	y	y	y	y	n	n
menus	y	y	y	y	n	n	y
full graphics	n	n	y	y	y	n	n
manual/doc.	n	y	y	y	y	y	y
text input	y	y	y	y	y	y	n
overall(20)	10	9	18	11	14	6	8

LEGEND:

- 1 = Top Drawer
- 2 = Multi-Draw 2068
- 3 = Art Studio
- 4 = The Artist
- 5 = Leonardo
- 6 = Paintbox
- 7 = 3d-Wu

TIMEX TIPS
By Chuck Dawson

QUESTION: Why is it that I can buy any brand of printer I want and hook it to my TS-2068 but all other accessories have to be brand specific, that is, made for the Timex. Why aren't all outputs from the back of a computer standard so that we consumers can mix and match as we like?

ANSWER: You have asked quite a question. To answer it, we must look back at the development of the computer industry. Evidently, in the early days, there was only one maker of parallel printers, that being Centronics. Since computer makers did not want to get into the business of making printers, they all had to provide the correct output for a Centronics printer. Even after others got into the printer manufacturing game, the Centronics interface was in such wide use, it was the de-facto standard, so they made their printers to use it. It has not really become obsolete even today because the data can be transferred to the printer much faster than the printer can use it, so even an old fashion eight-bit buss is plenty fast enough. This may soon end with the advent of laser printers which can print many times as fast as a dot-matrix or daisy-wheel printer.

The only other "standard signal" is the RS-232 which is for series type information and came to us from the days of the teletypewriter. Some companies do not want standard outputs from their machines because they want you to buy a printer, or modem, or whatever, from them. Some even try to find a strange looking plug or connector to use on the back of their units, so that they can overcharge you for a "special cable" to connect up your system. As for everybody getting together and agreeing on "standard" signals and plug configurations, this is a very good idea from the consumers point of view. Unfortunately, the only movement in that direction has come from the Japanese. The various Japanese computer manufacturers have agreed to adopt a set of standards, but since their machines are not in wide use, no one else has been forced to join yet.

So, in the final analysis, only the consumer can decide the question of standardization. If no one buys records that turn at 45 RPM but only those of the 33 RPM variety, soon no one will produce 45 RPM records. If computer manufacturerere would realize that their product is more attractive to the customer if he has his choice of accessories to pair with it, then maybe "standards" time will come. Until then, we must all suffer.

The Mystery of the Missing RAM.

By Rusty Townsend.

The QL uses 32K of RAM for memory and screen management.

When loaded, the ABACUS screen says you have 22K of RAM to work with.

Starting with 128K, the ABACUS program must use up 74K of RAM.

I recently acquired a 512K RAM memory expansion made by Miracle Systems Limited. I entered the given test program and verified that I had successfully added a 512K memory expansion. (There was no program given to prove that I now had access to 640K of RAM.)

Then I loaded ABACUS, expecting the screen to show that I now had 534K of RAM to work with, i.e., 512K plus the original 22K.

Instead, the screen showed that I only had 464K available, which is still plenty, but is 70K less than what I figure I paid for.

No matter how I play around with the numbers, I can't seem to find any suggestion of where the 70K went to, nor can I find anything in the QL manual to explain the situation.

Can anybody advise me about the whereabouts of my missing 70K ?

```
10 REM >>> ALT.CHAR. <<<<
20 BORDER 6: PAPER 6: INK 0: C
LS
30 LET a=PEEK 23606+256*PEEK 2
3607
70 PRINT AT 20,6;"Please wait
2 minutes Character Set be
ing Generated."
90 LET c=64000
110 FOR n=c TO c+1024: LET b=PE
EK a: POKE n,b
120 IF b/4=INT (b/4) THEN POKE
n,b+2
130 IF b/8=INT (b/8) THEN POKE
n,b+4
140 IF b/16=INT (b/16) THEN POK
E n,b+8
150 IF b/32=INT (b/32) THEN POK
E n,b+16
160 IF b/64=INT (b/64) THEN POK
E n,b+32
170 IF b=66 THEN POKE n,b+32
180 IF b=0 THEN POKE n,0
190 LET a=a+1: NEXT n: BEEP .1,
65
210 CLS : POKE 23607,c/256
220 PRINT AT 2,9;"Poke 23607,";
c/256
230 PRINT ""to obtain this char
acter set."
240 POKE 23607,60
250 PRINT AT 8,9;"Poke 23607,60
260 PRINT ""to return to normal
characters."
270 PRINT AT 14,0;"Save: SAVE a
lt char CODE 64000,1024"
280 PRINT ""This basic program
may be NEWED leaving sub-routin
e above RANTOP"" Press any
key to STOP"
290 PAUSE 0: CLEAR c: STOP
300 SAVE "ALT.CHAR." LINE 1
```

This is the program that produced the graphic
shown on the cover of the last issue.

```
1 REM ...reprinted from the
Feb/87 issue Harrisburg Area
Times Sinclair Users Group news
letter HATS.
```

```
2 FOR 0=1 TO 28
3 GO TO 200
40 GO TO 60
60 FOR z=1 TO 200
62 PLOT a,b: DRAW x-a,y-b
70 LET a=a+a1: LET b=b+b1
80 LET x=x+x1: LET y=y+y1
100 IF a>=255 OR a<=0 THEN LET
a1=-a1: LET a=a+a1
110 IF x>=255 OR x<=0 THEN LET
x1=-x1: LET x=x+x1
120 IF b>=175 OR b<=0 THEN LET
b1=-b1: LET b=b+b1
130 IF y>=175 OR y<=0 THEN LET
y1=-y1: LET y=y+y1
135 NEXT z
137 NEXT 0
199 REM ART
```

```
200 LET PAPER=INT (RAND*7): RAND
ORIZE : LET INK=INT (RAND*7): BOR
DER PAPER: CLS : PAPER PAPER: CL
S : INK INK: CLS
205 IF INK=PAPER AND INK=0 THEN
GO TO 207
206 IF INK<0 AND INK=PAPER THEN
LET INK=INK+3: INK INK: CLS : 0
TO 210
207 IF INK<>PAPER THEN GO TO 21
0
208 LET INK=INK+1: INK INK: CLS
210 LET a=INT (RAND*255): LET b=
INT (RAND*175)
220 LET x=INT (RAND*255): LET y=
INT (RAND*175)
230 LET a1=2: LET b1=2: LET x1=
4: LET y1=4
240 GO TO 60
998 STOP
999 SAVE "ART" LINE 2
1000 PAPER 0: INK 7
```

Hex Versus Decimal

One thing for sure, I am new to computing and computers are new to me.

My first computer was the ZX-80. Next came the ZX-81 followed by a TS-1000 and now the TS-2068. Neither myself or any of my computers understand hexadecimal (hex). My computer refuses to use anything but decimal. Realizing it is not intelligent, I figured for the last five years there must be something wrong with all of my computers. They must be inferior not recognizing hex!

All humans associated with computers converse in hex language. Why not my computers? After all, this is what all the programs written in hex are for!

Now I understand in the beginning, BC (before computing) why hex was easier to work with, when computing was done by switches and later by a limited sixteen key pad, but now we have full typewriter keyboards and do not have to use obsolete methods to program.

Finally I realized the reason my computer did not recognize hex, is because it did not need to. It is smart enough to convert decimal to binary. It didn't have to take simple decimal and convert to an un-understandable language, called hex to finally convert to its own language. It is smart enough to leave out the middle man and go direct.

Yes, hex is obsolete. -NO!!- How about Latin? The reason we don't use Latin is because it is too limited and no longer fills today's requirements. Neither does hex.

The new, smarter generation will dispense with hex. After all, hex only goes to 16! We now have 32 bit microprocessors and need a base 32. Pretty soon it will be 64, then what!? Give me good old decimal. That way I don't have to learn a language most of today's computers don't understand.

Here is a good example. Jeff Mazur wrote the Intermediate/Advanced Guide for the 2068. Throughout the book he used both decimal and hex. Sometimes separately and sometimes together. The computer he wrote about understands only decimal. As a result, neither the computer or I could use a lot of the information presented.

Now me, being a little smarter than the computer, went through the book and with the help of my handy-dandy calculator, converted all the hex to decimal and wrote in what the author left out. Now by gosh I can understand what he was talking about. You see Jeff, in spite of your attempts to confuse me, I out-smarted you. Now the computer understands.

When I tried to tell my 2068 to OUT 7F, it balked. It just wouldn't do a thing. The 7F should be presented as 7Fh. The h denoting hex. OUT 127 it understood perfectly.

Now here is a good one to demonstrate just how far the hex nut will go. I read an article that took easily understandable decimal and converted it to un-understandable hex, then created a BASIC program to convert the hex to decimal so the 2068 could understand it!! I read that one twice to see if I missed something.

There you have it. After five years I finally realize what my dumb computers knew all the time. Neither one of us can use hex. Viva la decimal.

Thornton E. Benson
Benson, AZ

Here are some more alternate character fonts.

```

10 FOR n=30000 TO 30041: READ
a: POKE n,a: NEXT n
15 DATA 33,0,61,17,0,118,1,0,3
,237,176,33,0,118,14,96,6,2,126,
,203,63,203,63,119,35,16,247,6,4,
126,203,63,119,35,16,249,35,35,1
3,200,24,230
20 RANDOMIZE USA 30000
25 POKE 23606,0: POKE 23607,11
7
30 STOP
35 REM RANDOMIZE USA 30000
turns on
40 REM POKE 23607,60
turns off
50 SAVE "jibjib" LINE 10

```

```

1 REM *** DATA FONT *** repri
nted from the Louisville Users G
roup newsletter "SLUG".
10 FOR n=30000 TO 30035: READ
a: POKE n,a: NEXT n
15 DATA 33,0,61,17,0,118,1,0,3
,237,176,33,0,118,6,96,197,35,35
,35,35,6,4,126,79,203,63,177,119
,35,16,247,193,16,237,201
20 RANDOMIZE USA 30000
25 POKE 23606,0: POKE 23607,11
7
30 STOP
35 REM RANDOMIZE USA 30000
turns on
40 REM POKE 23607,60
turns off
50 SAVE "DATA" LINE 10

```

```

1 REM ..."Square Font"...by R
.Glavas...from ZX Computing Mar/
87
2 REM ...for either 2068 or
Spectrum
10 LET mc=60000: LET chr=55000
20 FOR f=mc TO mc+26: READ a:
POKE f,a: NEXT f
30 DATA 17,0,200,237,83,64,92,
33,0,60,126,18,254,60,32,+3,62,1
26,18,19,35,124,254,64,32,-16,20
1
40 RANDOMIZE chr: POKE mc+1,PE
EK 23670: POKE mc+2,PEEK 23671:
LET l=USR mc
50 STOP
60 SAVE "squarefont" LINE 1

```

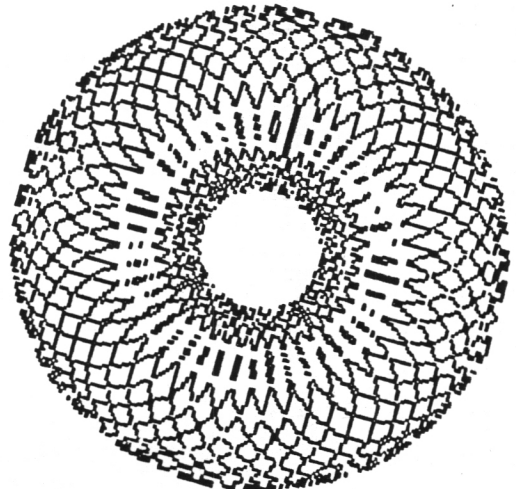
This is a typical "guess the number" game. With one hundred possibilities it seems impossible to get the correct answer.

```

5 SLOW
10 RAND
20 LET R=0
30 LET W=R
40 LET N=INT (RND*100)
50 PRINT AT 4,13;"E S P";AT 21
,0;"RIGHT: ";R;TAB 21;"WRONG: ";
W;AT 12,7;"WHAT IS MY NUMBER?";A
T 13,7;" "
60 INPUT I
70 IF I<>N THEN GOTO 110
80 PRINT AT 12,7;"THAT IS RIGH
T. "
90 LET R=R+1
100 GOTO 130
110 PRINT AT 12,7;"THAT IS WRON
G. "
120 LET W=W+1
130 PRINT TAB 7;"MY ANSWER IS
";AT 13,20;N
140 GOTO 40

```

Instead of entering numbers, just enter the variable "N" and the computer will be tricked into thinking that the correct answer has been given.





VSUG

The Vancouver Sinclair Users Group has been in existence since 1982. We are a support group for the owners and users of all SINCLAIR and TIMEX computers.

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